

IN THE CLAIMS

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1. (Currently Amended) A lamp housing apparatus comprising:
a reflector to reflect ~~capable of reflecting~~ a visible light and to pass ~~but passing~~ a radiation emitted from a light source disposed within the reflector; and
a housing coupled to the reflector, the housing having an inner surface to absorb ~~capable of absorbing~~ the passed radiation and an outer surface having a plurality of formations ~~to enlarge the area of the outer surface~~ so that the absorbed radiation can be transmitted as heat from the inner surface to the outer surface ~~at a reduced temperature,~~ wherein the reflector is disposed substantially completely within the housing.
 2. (Currently Amended) The lamp housing apparatus of claim 1, wherein the housing is further capable of blocking the visible light that strays from the reflector.
 3. (Currently Amended) The lamp housing apparatus of claim 2, wherein the inner surface of the housing is prepared to block the stray visible light.
 4. (Canceled)
 5. (Currently Amended) The lamp housing apparatus of claim 2 4, wherein the inner surface of the housing is prepared to enhance absorptivity of the passed radiation by applying a coating of an opaque material.

6. (Currently Amended) The lamp housing apparatus of claim 5, wherein the opaque material is paint.

7. (Currently Amended) The lamp housing apparatus of claim 2 4, wherein the inner surface of the housing is prepared to enhance absorptivity of the passed radiation by anodization.

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8. (Currently Amended) A The lamp housing of claim 4 comprising:
a reflector capable of reflecting a visible light but passing a radiation emitted from
a light source disposed within the reflector; and
a housing coupled to the reflector, the housing having an inner surface capable of
absorbing the passed radiation and an outer surface having a plurality of formations to
enlarge the area of the outer surface so that the absorbed radiation can be transmitted as
heat from the inner surface to the outer surface at a reduced temperature, wherein the inner surface of the housing is prepared to enhance absorptivity of the passed radiation by peening, wherein the housing is further capable of blocking the visible light that strays
from the reflector.

9. (Currently Amended) A The lamp housing of claim 4 comprising:
a reflector capable of reflecting a visible light but passing a radiation emitted from
a light source disposed within the reflector; and
a housing coupled to the reflector, the housing having an inner surface capable of
absorbing the passed radiation and an outer surface having a plurality of formations to

enlarge the area of the outer surface so that the absorbed radiation can be transmitted as heat from the inner surface to the outer surface at a reduced temperature, wherein the inner surface of the housing is prepared to enhance absorptivity of the passed radiation by knurling, wherein the housing is further capable of blocking the visible light that strays from the reflector.

10. (Currently Amended) The lamp housing apparatus of claim 2, wherein the outer surface of the housing blocks the stray visible light.

11. (Canceled)

12. (Currently Amended) The lamp housing apparatus of claim 1, wherein the absorbed radiation is infrared (IR) radiation.

13. (Currently Amended) The lamp housing apparatus of claim 1, wherein the plurality of formations are plates disposed in a parallel manner across the outer surface of the housing.

14. (Currently Amended) The lamp housing apparatus of claim 1, wherein the plurality of formations are fins disposed longitudinally across the outer surface of the housing.

15. (Currently Amended) The lamp housing apparatus of claim 1, wherein the plurality of formations are rings disposed latitudinally across the outer surface of the housing.

16. (Currently Amended) The lamp housing apparatus of claim 1, wherein the housing and the reflector are formed as an integral unit.

17-23. (Canceled)

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24. (Currently Amended) An The apparatus of claim 17 comprising:
a means for a reflector that is capable of reflecting a visible light but passing a
radiation emitted from a means for a light source disposed within the reflector; and
a means for a housing coupled to the reflector means, the housing means having
an inner surface and an outer surface, wherein the housing means include a means for
absorbing the passed radiation through the inner surface and a means for enlarging the
area of the outer surface with a plurality of formations so that the absorbed radiation can
be transmitted as heat from the inner surface to the outer surface at a reduced
temperature, wherein the means for absorbing the passed radiation through the inner surface is enhanced by peening the inner surface.

25. (Currently Amended) An The apparatus of claim 17 comprising:
a means for a reflector that is capable of reflecting a visible light but passing a
radiation emitted from a means for a light source disposed within the reflector; and

a means for a housing coupled to the reflector means, the housing means having an inner surface and an outer surface, wherein the housing means include a means for absorbing the passed radiation through the inner surface and a means for enlarging the area of the outer surface with a plurality of formations so that the absorbed radiation can be transmitted as heat from the inner surface to the outer surface at a reduced temperature, wherein the means for absorbing the passed radiation through the inner surface is enhanced by knurling the inner surface.

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26-32. (Canceled)

33. (Currently Amended) A method for managing light and radiation in a lamp comprising:

disposing a lamp that emits a visible light and a radiation in a reflector, the reflector reflecting the visible light but passing the radiation; and


encasing the lamp and reflector ~~in~~ substantially completely within a housing, the housing having an inner surface that absorbs the passed radiation and an outer surface from which extend a plurality of formations to enlarge the area of the outer surface so that the absorbed radiation can be emitted as heat from the outer surface at a reduced temperature.

34. (Original) The method of claim 33, further comprising blocking the visible light that strays from the reflector with the housing.

35. (Original) The method of claim 34, wherein the blocking is performed by the inner surface of the housing.

36. (Original) The method of claim 34, wherein the blocking is performed by the outer surface of the housing.

37. (Canceled)

 38. (Original) The method of claim 34, wherein the absorbed radiation is infrared (IR) radiation.

39. (Original) The method of claim 34, wherein the plurality of formations are plates disposed in a parallel manner across the outer surface of the housing.

40. (Original) The method of claim 34, wherein the plurality of formations are fins disposed longitudinally across the outer surface of the housing.

41. (Original) The method of claim 34, wherein the plurality of formations are rings disposed latitudinally across the outer surface of the housing.

42. (Original) The method of claim 34, further comprising forming the housing and the reflector as an integral unit.

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43. (Currently Amended) A projection lamp system, comprising:

a projector case ~~having a touchable surface;~~

a lamp housing disposed within the projector case, the lamp housing having a reflector to reflect ~~capable of reflecting a visible light and~~ but passing a radiation emitted from a light source disposed within the reflector; and

a heat dissipating housing coupled to the reflector, ~~the housing~~ having an inner surface capable of absorbing the passed radiation from the lamp housing and an outer surface having a plurality of formations to enlarge the area of the outer surface so that the absorbed radiation can be transmitted as heat from the inner surface to the outer surface ~~at a reduced temperature, and so that the touchable surface of the projector case is within the safety requirements for touch temperature, wherein the reflector is disposed~~ substantially completely within the heat dissipating housing.

44. (Currently Amended) The projection lamp system of claim 43, wherein the heat dissipating housing is further capable of blocking the visible light that strays from the reflector.

45. (Currently Amended) The projection lamp system of claim 44, wherein the inner surface of the heat dissipating housing is prepared to block the stray visible light.

46. (Currently Amended) The projection lamp system of claim 44, wherein the inner surface of the heat dissipating housing is prepared to enhance absorptivity of the passed radiation.

47. (Currently Amended) The projection lamp system of claim 46, wherein the inner surface of the heat dissipating housing is prepared to enhance absorptivity of the passed radiation by applying a coating of an opaque material.

A 48. (Original) The projection lamp system of claim 47, wherein the opaque material is paint.

49. (Currently Amended) The projection lamp system of claim 46, wherein the inner surface of the heat dissipating housing is prepared to enhance absorptivity of the passed radiation by anodization.

50. (Currently Amended) ~~A The projection lamp system of claim 46,~~
comprising:

a projector case having a touchable surface;

a lamp housing disposed within the projector case, the lamp housing having a reflector capable of reflecting a visible light but passing a radiation emitted from a light source disposed within the reflector; and

a housing coupled to the reflector, the housing having an inner surface capable of absorbing the passed radiation and an outer surface having a plurality of formations to

enlarge the area of the outer surface so that the absorbed radiation can be transmitted as heat from the inner surface to the outer surface at a reduced temperature, and so that the touchable surface of the projector case is within the safety requirements for touch temperature, wherein the inner surface of the housing is prepared to enhance absorptivity of the passed radiation by peening, wherein the housing is further capable of blocking the visible light that strays from the reflector.

A 51. (Currently Amended) A The-projection lamp system of claim 46,
comprising:

a projector case having a touchable surface;

a lamp housing disposed within the projector case, the lamp housing having a reflector capable of reflecting a visible light but passing a radiation emitted from a light source disposed within the reflector; and

a housing coupled to the reflector, the housing having an inner surface capable of absorbing the passed radiation and an outer surface having a plurality of formations to enlarge the area of the outer surface so that the absorbed radiation can be transmitted as heat from the inner surface to the outer surface at a reduced temperature, and so that the touchable surface of the projector case is within the safety requirements for touch temperature, wherein the inner surface of the housing is prepared to enhance absorptivity of the passed radiation by knurling, wherein the housing is further capable of blocking the visible light that strays from the reflector.

52. (Original) The projection lamp system of claim 44, wherein the outer surface of the housing blocks the stray visible light.

53. (Canceled)

54. (Original) The projection lamp system of claim 43, wherein the absorbed radiation is infrared (IR) radiation.

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55. (Original) The projection lamp system of claim 43, wherein the plurality of formations are plates disposed in a parallel manner across the outer surface of the housing.

56. (Original) The projection lamp system of claim 43, wherein the plurality of formations are fins disposed longitudinally across the outer surface of the housing.

57. (Original) The projection lamp system of claim 43, wherein the plurality of formations are rings disposed latitudinally across the outer surface of the housing.

58. (Original) The projection lamp system of claim 43, wherein the housing and the reflector are formed as an integral unit.
